

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-27 (canceled)

Claim 28 (new): Oxygen-reduced valve metal oxide particles having an average primary particle size of from 1 micron to 10.5 microns.

Claims 29 (new): The oxygen-reduced valve metal oxide particles of claim 28, wherein said particles have a specific surface area of from about  $0.5 \text{ m}^2/\text{g}$  or higher.

Claim 30 (new): The oxygen-reduced valve metal oxide particles of claim 28, wherein said particles have a specific surface area of from about 0.5 to about  $10 \text{ m}^2/\text{g}$ .

Claim 31 (new): The oxygen-reduced valve metal oxide particles of claim 28, wherein said specific surface area is from about 0.5 to about  $2.0 \text{ m}^2/\text{g}$ .

Claim 32 (new): The oxygen-reduced valve metal oxide particles of claim 28, wherein said particles have a specific surface area of from about 1.0 to about  $1.5 \text{ m}^2/\text{g}$ .

Claim 33 (new): The oxygen-reduced valve oxide particles of claim 28, wherein said particles have an apparent density of less than about  $2.0 \text{ g/cc}$ .

Claim 34 (new): The oxygen-reduced valve metal oxide particles of claim 28, wherein said particles have an apparent density of less than about  $1.5 \text{ g/cc}$ .

Claim 35 (new): The oxygen-reduced valve metal oxide particles of claim 28, wherein said particles have an apparent density of from 0.5 to about  $1.5 \text{ g/cc}$ .

Claim 36 (new): The oxygen-reduced valve metal oxide particles of claim 28, wherein said particles, when formed into an anode, have a capacitance capability of from 1,000 to about

300,000 CV/g.

Claim 37 (new): The oxygen-reduced valve metal oxide particles of claim 28, wherein said particles, when formed into an anode, have a capacitance capability of from about 62,000 to about 200,000 CV/g.

Claim 38 (new): Agglomerated oxygen-reduced valve metal oxide comprising agglomerate sizes of less than 425 microns.

Claim 39 (new): The agglomerated oxygen-reduced valve metal oxide of claim 38, wherein said agglomerate size is less than 300 microns.

Claim 40 (new): The agglomerated oxygen-reduced valve metal oxide of claim 38, wherein said agglomerate size is from 150 to 300 microns.

Claim 41 (new): Agglomerated oxygen-reduced valve metal oxide having a flow of 270 mg/s or less.

Claim 42 (new): The agglomerated oxygen-reduced valve metal oxide of claim 41, wherein said flow is from 3 mg/s to 270 mg/s.

Claim 43 (new): The agglomerated oxygen-reduced valve metal oxide of claim 41, wherein said flow is from 20 to 270 mg/s.

Claim 44 (new): Oxygen-reduced valve metal oxide having a flow of 270 mg/s or less.

Claim 45 (new): The oxygen-reduced valve metal oxide of claim 44, wherein said flow is from 3 mg/s to 270 mg/s.

Claim 46 (new): The oxygen-reduced valve metal oxide of claim 44, wherein said flow is from 20 to 270 mg/s.

Claim 47 (new): The agglomerated oxygen-reduced valve metal oxides of claim 41, wherein said oxygen-reduced valve metal oxide is aluminum oxide.

Preliminary Amendment  
U.S. Patent Application No. Unassigned

Claim 48 (new): The agglomerated oxygen-reduced valve metal oxide of claim 41, wherein said oxygen-reduced valve metal oxide is tantalum oxide.

Claim 49 (new): The agglomerated oxygen-reduced valve metal oxide of claim 41, wherein said oxygen-reduced valve reduced metal oxide is a titanium oxide.

Claim 50 (new): The agglomerated oxygen-reduced valve metal oxide of claim 41, wherein said oxygen-reduced valve metal oxide is zirconium oxide.

Claim 51 (new): The agglomerated oxygen-reduced valve metal oxide of claim 41, wherein said oxygen-reduced valve metal oxide is vanadium oxide.

Claim 52 (new): An agglomerated product comprising an oxygen-reduced valve metal oxide powder coated with at least one additive.

Claim 53 (new): The agglomerated product of claim 52, wherein at least 75% of the surface area of the oxygen-reduced valve metal oxide powder is coated with said at least one additive.

Claim 54 (new): The agglomerated product of claim 52, wherein said additive is at least one binder, lubricant, or both.

Claim 55 (new): The agglomerated product of claim 52, wherein said additive is polypropylene carbonate, alkyd resin solution, polyethylene glycol, polyvinylalcohol, stearic acid, ammonium carbonate, camphor, polypropylene oxide, polyethylene glycol monomethyl ether, polyethylene dimethyl ether, a fatty acid other than stearic acid, or combinations thereof.

Claim 56 (new): The oxygen-reduced valve metal oxide particles of claim 28, wherein said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 57 (new): The oxygen-reduced valve metal oxide particles of claim 56, wherein said oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less

than 2.

Claim 58 (new): The oxygen-reduced valve metal oxide particles of claim 56, wherein said oxygen-reduced niobium oxide is  $\text{Nb}_{0.7}$ ,  $\text{NbO}$ ,  $\text{NbO}_{1.1}$ , or combinations thereof.

Claim 59 (new): The oxygen-reduced valve metal oxide particles of claim 29, wherein said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 60 (new): The oxygen-reduced valve metal oxide particles of claim 59, wherein said oxygen-reduced niobium oxide has the formula  $\text{Nb}_x\text{O}_y$  wherein x is less than 2 and y is less than 2.

Claim 61 (new): The oxygen-reduced valve metal oxide particles of claim 59, wherein said oxygen-reduced niobium oxide is  $\text{Nb}_{0.7}$ ,  $\text{NbO}$ ,  $\text{NbO}_{1.1}$ , or combinations thereof.

Claim 62 (new): The oxygen-reduced valve metal oxide particles of claim 30, wherein said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 63 (new): The oxygen-reduced valve metal oxide particles of claim 62, wherein said oxygen-reduced niobium oxide has the formula  $\text{Nb}_x\text{O}_y$  wherein x is less than 2 and y is less than 2.

Claim 64 (new): The oxygen-reduced valve metal oxide particles of claim 62, wherein said oxygen-reduced niobium oxide is  $\text{Nb}_{0.7}$ ,  $\text{NbO}$ ,  $\text{NbO}_{1.1}$ , or combinations thereof.

Claim 65 (new): The oxygen-reduced valve metal oxide particles of claim 31, wherein said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 66 (new): The oxygen-reduced valve metal oxide particles of claim 65, wherein said oxygen-reduced niobium oxide has the formula  $\text{Nb}_x\text{O}_y$  wherein x is less than 2 and y is less than 2.

Claim 67 (new): The oxygen-reduced valve metal oxide particles of claim 65, wherein

said oxygen-reduced niobium oxide is  $\text{Nb}_{0.7}$ ,  $\text{NbO}$ ,  $\text{NbO}_{1.1}$ , or combinations thereof.

Claim 68 (new): The oxygen-reduced valve metal oxide particles of claim 32, wherein said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 69 (new): The oxygen-reduced valve metal oxide particles of claim 68, wherein said oxygen-reduced niobium oxide has the formula  $\text{Nb}_x\text{O}_y$  wherein  $x$  is less than 2 and  $y$  is less than 2.

Claim 70 (new): The oxygen-reduced valve metal oxide particles of claim 68, wherein said oxygen-reduced niobium oxide is  $\text{Nb}_{0.7}$ ,  $\text{NbO}$ ,  $\text{NbO}_{1.1}$ , or combinations thereof.

Claim 71 (new): The oxygen-reduced valve metal oxide particles of claim 33, wherein said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 72 (new): The oxygen-reduced valve metal oxide particles of claim 71, wherein said oxygen-reduced niobium oxide has the formula  $\text{Nb}_x\text{O}_y$  wherein  $x$  is less than 2 and  $y$  is less than 2.

Claim 73 (new): The oxygen-reduced valve metal oxide particles of claim 71, wherein said oxygen-reduced niobium oxide is  $\text{Nb}_{0.7}$ ,  $\text{NbO}$ ,  $\text{NbO}_{1.1}$ , or combinations thereof.

Claim 74 (new): The oxygen-reduced valve metal oxide particles of claim 34, wherein said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 75 (new): The oxygen-reduced valve metal oxide particles of claim 74, wherein said oxygen-reduced niobium oxide has the formula  $\text{Nb}_x\text{O}_y$  wherein  $x$  is less than 2 and  $y$  is less than 2.

Claim 76 (new): The oxygen-reduced valve metal oxide particles of claim 74, wherein said oxygen-reduced niobium oxide is  $\text{Nb}_{0.7}$ ,  $\text{NbO}$ ,  $\text{NbO}_{1.1}$ , or combinations thereof.

Claim 77 (new): The oxygen-reduced valve metal oxide particles of claim 35, wherein

said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 78 (new): The oxygen-reduced valve metal oxide particles of claim 77, wherein said oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein  $x$  is less than 2 and  $y$  is less than 2.

Claim 79 (new): The oxygen-reduced valve metal oxide particles of claim 77, wherein said oxygen-reduced niobium oxide is  $Nb_{0.7}$ ,  $NbO$ ,  $NbO_{1.1}$ , or combinations thereof.

Claim 80 (new): The oxygen-reduced valve metal oxide particles of claim 36, wherein said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 81 (new): The oxygen-reduced valve metal oxide particles of claim 80, wherein said oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein  $x$  is less than 2 and  $y$  is less than 2.

Claim 82 (new): The oxygen-reduced valve metal oxide particles of claim 80, wherein said oxygen-reduced niobium oxide is  $Nb_{0.7}$ ,  $NbO$ ,  $NbO_{1.1}$ , or combinations thereof.

Claim 83 (new): The oxygen-reduced valve metal oxide particles of claim 37, wherein said oxygen-reduced valve metal oxide particles are oxygen-reduced niobium oxide particles.

Claim 84 (new): The oxygen-reduced valve metal oxide particles of claim 83, wherein said oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein  $x$  is less than 2 and  $y$  is less than 2.

Claim 85 (new): The oxygen-reduced valve metal oxide particles of claim 83, wherein said oxygen-reduced niobium oxide is  $Nb_{0.7}$ ,  $NbO$ ,  $NbO_{1.1}$ , or combinations thereof.

Claim 86 (new): The agglomerated oxygen-reduced valve metal oxide of claim 38, wherein said agglomerated oxygen-reduced valve metal oxide is oxygen-reduced niobium oxide.

Claim 87 (new): The agglomerated oxygen-reduced valve metal oxide of claim 86,

.. Preliminary Amendment

U.S. Patent Application No. Unassigned

wherein said agglomerated oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less than 2.

Claim 88 (new): The agglomerated oxygen-reduced valve metal oxide of claim 86, wherein said agglomerated oxygen-reduced niobium oxide is  $Nb_{0.7}$ , NbO,  $NbO_{1.1}$ , or combinations thereof.

Claim 89 (new): The agglomerated oxygen-reduced valve metal oxide of claim 39, wherein said agglomerated oxygen-reduced valve metal oxide is oxygen-reduced niobium oxide.

Claim 90 (new): The agglomerated oxygen-reduced valve metal oxide of claim 89, wherein said agglomerated oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less than 2.

Claim 91 (new): The agglomerated oxygen-reduced valve metal oxide of claim 89, wherein said agglomerated oxygen-reduced niobium oxide is  $Nb_{0.7}$ , NbO,  $NbO_{1.1}$ , or combinations thereof.

Claim 92 (new): The agglomerated oxygen-reduced valve metal oxide of claim 40, wherein said agglomerated oxygen-reduced valve metal oxide is oxygen-reduced niobium oxide.

Claim 93 (new): The agglomerated oxygen-reduced valve metal oxide of claim 92, wherein said agglomerated oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less than 2.

Claim 94 (new): The agglomerated oxygen-reduced valve metal oxide of claim 92, wherein said agglomerated oxygen-reduced niobium oxide is  $Nb_{0.7}$ , NbO,  $NbO_{1.1}$ , or combinations thereof.

Claim 95 (new): The agglomerated oxygen-reduced valve metal oxide of claim 41, wherein said agglomerated oxygen-reduced valve metal oxide is oxygen-reduced niobium oxide.

Claim 96 (new): The agglomerated oxygen-reduced valve metal oxide of claim 95, wherein said agglomerated oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less than 2.

Claim 97 (new): The agglomerated oxygen-reduced valve metal oxide of claim 95, wherein said agglomerated oxygen-reduced niobium oxide is  $Nb_{0.7}$ , NbO,  $NbO_{1.1}$ , or combinations thereof.

Claim 98 (new): The agglomerated oxygen-reduced valve metal oxide of claim 42, wherein said agglomerated oxygen-reduced valve metal oxide is oxygen-reduced niobium oxide.

Claim 99 (new): The agglomerated oxygen-reduced valve metal oxide of claim 98, wherein said agglomerated oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less than 2.

Claim 100 (new): The agglomerated oxygen-reduced valve metal oxide of claim 98, wherein said agglomerated oxygen-reduced niobium oxide is  $Nb_{0.7}$ , NbO,  $NbO_{1.1}$ , or combinations thereof.

Claim 101 (new): The agglomerated oxygen-reduced valve metal oxide of claim 43, wherein said agglomerated oxygen-reduced valve metal oxide is oxygen-reduced niobium oxide.

Claim 102 (new): The agglomerated oxygen-reduced valve metal oxide of claim 101, wherein said agglomerated oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less than 2.

Claim 103 (new): The agglomerated oxygen-reduced valve metal oxide of claim 101, wherein said agglomerated oxygen-reduced niobium oxide is  $Nb_{0.7}$ , NbO,  $NbO_{1.1}$ , or combinations thereof.

Claim 104 (new): The oxygen-reduced valve metal oxide of claim 44, wherein said



oxygen-reduced valve metal oxide are oxygen-reduced niobium oxide.

Claim 105 (new): The oxygen-reduced valve metal oxide of claim 104, wherein said oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less than 2.

Claim 106 (new): The oxygen-reduced valve metal oxide of claim 104, wherein said oxygen-reduced niobium oxide is  $Nb_{0.7}$ , NbO,  $NbO_{1.1}$ , or combinations thereof.

Claim 107 (new): The oxygen-reduced valve metal oxide of claim 45, wherein said oxygen-reduced valve metal oxide are oxygen-reduced niobium oxide particles.

Claim 108 (new): The oxygen-reduced valve metal oxide of claim 107, wherein said oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less than 2.

Claim 109 (new): The oxygen-reduced valve metal oxide of claim 107, wherein said oxygen-reduced niobium oxide is  $Nb_{0.7}$ , NbO,  $NbO_{1.1}$ , or combinations thereof.

Claim 110 (new): The oxygen-reduced valve metal oxide of claim 46, wherein said oxygen-reduced valve metal oxide are oxygen-reduced niobium oxide.

Claim 111(new): The oxygen-reduced valve metal oxide of claim 110, wherein said oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  wherein x is less than 2 and y is less than 2.

Claim 112 (new): The oxygen-reduced valve metal oxide of claim 110, wherein said oxygen-reduced niobium oxide is  $Nb_{0.7}$ , NbO,  $NbO_{1.1}$ , or combinations thereof.